**Homework 27H Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Exponents and Scientific Notation Period:\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Failure to show work and write in complete sentences on all problems will result in a LaSalle.**

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| 1. Convert the following into standard notation:  a. 256 x 10-7  b. 3.4 x 105  c. 0.45 x 10-6 | 2. For all nonzero values of a, b, and c, the expression is equivalent to what? | 3. Of the following numbers, which is the smallest value?  A) 6,120  B) 612 x  C) 6.12 x  D) 0.00612 x  E) 6.12 x |
| 4. Simplify: | 5. Simplify: | 6. Simplify: |
| 7. Your classmate says that **0.0000000432** represented in scientific notation is **4.32 x 108**. Is your classmate right or wrong? Explain and show work.  *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*  *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*  *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*  *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* | 8. Which of the following has the greatest value?  A) 3.1x  B) 31 x  C) 0.0031 x  D) 310,000  E) 0.31 x | 9. Convert the following into scientific notation:  a. 12,000  b. 0.000563  c. 557,000,000  d. 64  e. 908  f. 7 |
| 10. |
| 11. Simplify: | 12. Simplify: | 13. Simplify: |

Watch the Kahn Academy video (type this into *“Search for a video or playlist”)*:

**How to Rationalize a Denominator**

Link: [www.khanacademy.org/video/how-to-rationalize-a-denominator?playlist=ck12.org+Algebra+1+Examples](http://www.khanacademy.org/video/how-to-rationalize-a-denominator?playlist=ck12.org+Algebra+1+Examples)

Play from **START** until **3:17**. Failure to watch the video and respond in **COMPLETE sentences** will result in LASALLE!

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| 1. Name at least one reason Khan says we “rationalize the denominator.”  ­­**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | |
| 2. What is “wrong” with the following expression according to Khan? | 3. Simplify all of the following expressions.   1. = \_\_\_ b. = \_\_\_   c. = \_\_\_ d. = \_\_\_  e. = \_\_\_ f. = \_\_\_ |
| 4. In your calculator, type the following operations, and record answers:   1. ( )( ) = \_\_\_\_\_ b. ( )( ) = \_\_\_\_\_ c. ( )( ) = \_\_\_\_\_   What pattern to you notice?  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | |

Follow along with the two examples that Khan provides in rationalizing the denominator. Show all the same work presented in the video.

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| 4. | 5. |